WHAT IS CLAIMED IS:

1. A pulse wave measuring apparatus comprising:

a first calculation unit calculating a wave of multi-dimensional derivative from a pulse wave of one beat to obtain a characteristic point of multi-dimensional derivative, and

a second calculation unit calculating, based on presence of a certain characteristic point of multi-dimensional derivative calculated by said first calculation unit in a predetermined interval of said pulse wave of one beat, one of an early systolic component and late systolic component corresponding to said predetermined interval, using said certain characteristic point of multi-dimensional derivative.

2. The pulse wave measuring apparatus according to claim 1, wherein

said predetermined interval is an interval of a rising phase from a start of said pulse wave of one beat to a pulse wave highest point, and

said second calculation unit calculates the early systolic component using said characteristic point of multi-dimensional derivative when said certain characteristic point of multi-dimensional derivative is present in said rising phase interval.

3. The pulse wave measuring apparatus according to claim 2, wherein said second calculation unit uses said pulse wave highest point in the calculation of said early systolic component when a position of said certain characteristic point of multi-dimensional derivative approximates said pulse wave highest point and said pulse wave is a pulse wave immediately preceding an eventual match of said position of said certain characteristic point of multi-dimensional derivative to said pulse wave highest point to be indiscernible.

4. The pulse wave measuring apparatus according to claim 1, wherein

said predetermined interval is an interval of a falling phase from a pulse wave highest point to a next notch point of said pulse wave highest point, and

said second calculation unit calculates the late systolic component using said characteristic point of a multi-dimensional derivative when said certain characteristic point of multi-dimensional derivative is present in said falling phase interval.

5. The pulse wave measuring apparatus according to claim 4, wherein said second calculation unit uses said pulse wave highest point in the calculation of said late systolic component when a position of said certain characteristic point of multi-dimensional derivative approximates said pulse wave highest point and said pulse wave is a pulse wave immediately preceding an eventual match of said position of said certain characteristic point of multi-dimensional derivative to said pulse wave highest point to be indiscernible.

6. The pulse wave measuring apparatus according to claim 4, wherein said second calculation unit uses said notch point in the calculation of said late systolic component when a position of said certain characteristic point of multi-dimensional derivative approximates said notch point and said pulse wave is a pulse wave immediately preceding an eventual match of said position of said certain characteristic point of multi-dimensional derivative to said notch point to be indiscernible.

7. The pulse wave measuring apparatus according to claim 1, wherein said certain characteristic point of multi-dimensional derivative is a minimum of a wave of third derivative.

8. The pulse wave measuring apparatus according to claim 1, wherein said certain characteristic point of multi-dimensional derivative is a maximum of a wave of third derivative.

9. A biological wave analysis program product causing a computer to execute analysis of a biological wave that is a superposition of a first waveform and second waveform, causing the computer to execute:

a first calculation step of calculating a wave of multi-dimensional derivative from said biological wave of one beat to obtain a characteristic point of multi-dimensional derivative, and

a second calculation step of calculating, based on presence of a certain characteristic point of multi-dimensional derivative calculated by said first step of calculating in a predetermined interval of said biological wave of one beat, one of said first waveform and second waveform corresponding to said predetermined interval, using said certain characteristic point of multi-dimensional derivative.

10. The biological wave analysis program product according to claim 9, wherein

said predetermined interval is an interval of a rising phase from a start to a highest point of said biological wave of one beat, and

said second calculation step calculates said first waveform using said characteristic point of multi-dimensional derivative when said certain characteristic point of multi-dimensional derivative is present at said rising phase interval.

11. The biological wave analysis program product according to claim 10, wherein said second calculation step uses said highest point in the calculation of said first waveform when a position of said certain characteristic point of multi-dimensional derivative approximates said highest point and said biological wave is a biological wave immediately preceding an eventual match of said position of said certain characteristic point of multi-dimensional derivative to said highest point to be indiscernible.

12. The biological wave analysis program product according to claim 9,

wherein said predetermined interval is an interval of a falling phase from the highest point to a next notch point of said highest point, and

said second calculation step calculates said second waveform using said characteristic point of multi-dimensional derivative when said certain characteristic point of multi-dimensional derivative is present in said falling phase interval.

13. The biological wave analysis program product according to claim 12, wherein said second calculation step uses said highest point in the calculation of said second waveform when a position of said certain characteristic point of multi-dimensional derivative approximates said highest point and said biological wave is a biological wave immediately preceding an eventual match of said position of said certain characteristic point of multi-dimensional derivative to said highest point to be indiscernible.

14. The biological wave analysis program product according to claim 12, wherein said second calculation step uses said notch point in the calculation of said second waveform when a position of said certain characteristic point of multi-dimensional derivative approximates said notch point and said biological wave is a biological wave immediately preceding an eventual match of said position of said certain characteristic point of multi-dimensional derivative to said notch point to be indiscernible..

15. The biological wave analysis program product according to claim 9, wherein said certain characteristic point of multi-dimensional derivative is a minimum of a wave of third derivative.

16. The biological wave analysis program product according to claim 9, wherein said certain characteristic point of multi-dimensional derivative is a maximum of a wave of third derivative.